

# **ABSTRACT OF THE DISCLOSURE**

A physical layer of a USB interface. A test signal generator generates a test signal. A signal sampling device coupled to the test signal generator samples the test signal and  
5 outputs the test signal after a predetermined time. A transmitter and a receiver coupled to a signal access the data of the transmission terminals. A USB transceiver macrocell coupled to the test signal generator, the transmitter and receiver converts the test signal to USB protocol, outputs a  
10 first converted signal through the transmitter, receives the first converted signal through the transmission terminals and the receiver, and converts the received first converted signal to a second converted signal. A comparator coupled to the USB transceiver macrocell and the signal sampling device compares  
15 the second converted signal with the test signal, and outputs an error acknowledging signal.